\*\*Write a brief, but thorough document addressing the following from Case Study below.

* 1. What data would illustrate whether these underlying problems are occurring? Which method of data gathering would you use and why? (Consider using the method of analysis show in  the Table below)
	2. What are the advantages and disadvantages of that method?

|  |  |  |  |
| --- | --- | --- | --- |
| Facts From Client’sDescription of Problem | PossibleInterpretation orReason | Data Needed | Best-SuitedMethod |
| New employees do not process insurance claims as quickly as experiencedEmployees. | Employees do notlearn the processAccurately. | Ask new employees abouttheir orientationexperience andTraining. | Interviews |
| Sales figures in Midwest are significantly lowerThan East or West regions. | Salespeople inMidwest makefewer sales thanIn other regions. | Gather revenueper employee data in each region for past3 quarters. | Unobtrusivemeasure |

“I want to thank you for meeting with me,” said Patrick Delacroix. “We have an important issue that I’m hoping you can address. It’s costing the company a lot of time and money, and I think that the project that we’re going to plan out will really help solve a major problem in our group.”

Patrick Delacroix, executive vice president of engineering for AeroTech, an aerospace technology research and products firm, was sitting behind a large walnut desk at AeroTech headquarters. Cassandra Wilson, an organization development consultant in the AeroTech human resources department, had been assigned to consult with the engineering organization and was anxious to hear more about the problem that Patrick had called her to discuss.

AeroTech headquarters is located in the suburbs of a large metropolitan area. It is housed in an older concrete building that was built in the 1970s without many windows or the showy glass and steel architecture characteristic of many of the other companies in the area. In fact, these days it would be easy to drive by the headquarters and not know that this major, multimillion-dollar company was even located there. AeroTech has a long and distinguished history, having been a major supplier to the top government contractors contributing to U.S. space and defense programs in the 1980s. In the past 20 years, however, it has fallen out of favor among government contractors as quality problems plagued the company’s products. The company briefly considered bankruptcy but averted a Chapter 11 filing when its new CEO was named 4 years ago. The CEO helped the company to partially recover by revising its strategy, and as a result, AeroTech has now begun to diversify into other areas in which there is higher demand. Some of these new business segments have become very successful enterprises, but it is clear that the pressure is high to succeed in the new lines of business. An article in the local newspaper predicted the demise of AeroTech if annual losses continue at the present rate, and it suggested that based on financial analysts’ projections, layoffs this year are almost certain to repeat last year’s 16%reduction of AeroTech staff. “With financial performance mirroring last year’s,” the article concluded, “we may be witnessing the slow death of one of the metro area’s original companies. Unless it merges or is acquired, we would be surprised if we are still reporting on AeroTech news a few years from now.” Patrick began at AeroTech nearly 25 years ago as an associate engineer, a few years after he finished his doctorate in engineering from a local university. He has witnessed the extensive changes in research and development of engineering products in his various roles as engineering manager for metals fabrication, director of the new component division, and now as vice president of the entire engineering operation. He lived through the decline in personnel and morale after quality problems forced the closure of the fabrication operation, but he also oversaw the rise in revenues following the successful component products released in the past 6 years. Most recently he presided over the largest loss of engineering talent that the company had seen through voluntary and involuntary termination programs. Much of the new strategic direction is riding on his shoulders. “I’ll get right to the point. As you can imagine, I’m under a great deal of pressure to get the new laser systems released to the market,” he began. “I can understand,” Cassandra said. “I’ve heard that everything is on track with product development at least, is that right?”

“I wish it were that simple,” Patrick said. “Developing advanced laser systems are a complex operation. We’re relying on our best and brightest engineers to create some of the most innovative applications of advanced laser technology on the market today. If we pull it off as planned, it will be an incredible success for the company. Unfortunately, we can’t always predict how long it will take to develop a product. How long it takes to be creative is a volatile challenge that’s always present in our division. We also have to balance cycle time with our financial investments in research and development. We put a lot of pressure on our engineers, and we count on them to deliver.” Cassandra nodded. “I do hear that many of them are working nights and weekends. So what brings you to requesting our meeting today?”

“First let me give you a bit of background. As you know, we have five engineering teams in this division: laser systems, component systems (which are separated into two teams, new components and enhancements to existing components), satellite technology, and custom design. The laser and satellite teams are relatively new, having only been organized in that way since last year, and you’ll recognize that they’re the two critical areas in the new direction of the company. The other teams have the same charter that they’ve had for the past few years.”

Patrick continued. “Productivity is my main issue. We have very limited budgets and very short delivery windows in which we’re expected to produce results for the business. If we don’t produce, a competitor will get to the market faster and we’ll essentially have lost the battle. Right now we’re not doing a very good job of that.” “Tell me more about what you mean by productivity,” Cassandra said. “I mean that in general we’re not meeting our commitments to getting our products out. As a result, we’re losing market share each time we’re late to reaching the point at which our products are generally available. That impacts our sales force, marketing efforts, and the credibility of the engineering team.”

“What do you think is causing low productivity?” she asked.

“Well, I think that there are many factors, but the most basic seems to be time management.

Obviously how our engineers spend their time is critical. We need them to be skilled at prioritizing their time to spend it on the most value-adding activities so that the development activities can be completed on time.” Patrick paused. “We need them to be self-managing and productive. That’s why I called. I’d like to ask for your help in designing a time management and prioritization seminar to address some of the issues that I see among the engineers. You might throw in a little project management as well.”

“We can certainly consider that,” Cassandra said. “Let me ask you a couple of questions to better understand what’s happening with your group. What’s led you to the conclusion that they can’t manage their time well?”

“Well, I’m obviously nervous about the laser systems team,” Patrick said, “so I walk downstairs pretty frequently to get an update and to see how things are going. Almost every time I’m down there I see people working, but the results just don’t seem to be there.”

“What have you done so far?” she asked.

“I prefer to let my managers do the managing. I don’t like to bypass them. And they know that the entire company is waiting for the product to be ready. But I have to be fair here. It’s not everyone, it’s mostly Todd’s group.”

“Who is Todd?” Cassandra asked.

“Todd Lyman is the manager of the laser systems engineering group. He joined the company last year at this time, right after we reorganized the engineering group after the layoffs,” Patrick said. “We brought him in from the outside to lead the development of the new laser systems. We were lucky to recruit him, since he has extensive background in laser engineering management at one of our competitors. He’s incredibly intelligent, well liked, and came with great credentials.”

“I think I may have heard his name. So the problem with productivity is really in Todd’s group?” Cassandra asked.

“Yes. Since he arrived his team has led three new product releases. Two were product upgrades and one was a new product. Two of the three were delayed beyond their original expected release date,” Patrick said.

“How did the laser products group perform before the reorganization and before Todd joined?”

“Just fine,” Patrick said. “That’s what’s so frustrating about these product delays.

There’s no apparent reason for them. Before, the group was like a machine. They would get a product design request, and they would do it. Many times they operated under budget. Now they’re over budget and missing deadlines. It’s really getting embarrassing to me personally, actually. Since Todd’s arrival the group’s performance has declined considerably. That leads me to my second request. I’d like to ask for you to engage Todd in some management coaching to build his management skills.”

“Before we talk about Todd, let me ask you a few more questions about the group and its history. Who led the group before?” Cassandra asked. “How was that person perceived by the engineers in the group?”

“Ed Herman was a very popular manager. We were sorry to lose him. He was really a good company guy who knew how things were done around here, but he is now on a golf course in Florida having a great time in retirement. I envy the guy.” Patrick smiled.

“So when Ed left, what happened to the group? How would you describe the team’s reaction?” Cassandra inquired.

“Ed left right before the reorganization. In fact, it was Ed’s departure that led me to rethink how we would organize things differently. In order to get some cross-pollination of Ed’s excellent and productive team, I moved a few of them into satellite technology, and a few of them into custom design. I figured that would enhance the skills of both of those teams, since satellite is a new team, and custom design is a high-margin business.

Ed’s team was really close-knit. After that move was announced, a couple of the remaining engineers that were left behind asked to be moved with their colleagues into the other two groups. I guess they missed their old colleagues, but I couldn’t afford to have the entire team disbanded like that, so they stayed behind.”

“After you hired Todd, how did the team respond?” Cassandra asked.

“The team was small at the time, but they participated in the interview process, interviewing each of the candidates and providing feedback to me, and I agreed with their recommendation to hire Todd. I think that was a good process to get their buy-in for their new manager. Once Todd arrived, he had the responsibility of hiring about six new engineers to replace some of the staff that was reassigned during the organizational structure change,” Patrick offered.

“The team is a mix of new and tenured engineers, then,” Cassandra said. “What else can you tell me about the composition of Todd’s team?”

“Let’s see. There are probably a dozen engineers, ranging in age from late twenties to mid-sixties. Most are in their late forties to early fifties. The new ones joined only within the past year, obviously, and among those that were already a part of the team, the average tenure is probably 15 years or so. They have extensive educational backgrounds and are among the most highly skilled engineers I’ve met.”

“What’s been the morale among those engineers that were transferred and those that stayed behind in the laser group?” Cassandra asked.

Patrick shrugged. “Fine, I assume. I haven’t heard any specific complaints.”

“Other than Todd’s group, how are the other engineering teams doing, in your assessment?” Cassandra asked.

“Very successful,” Patrick said. “I haven’t been more pleased with the performance of the satellite and custom design teams. They’ve really come through during a difficult time, especially with budget cutbacks that have affected each of our teams a great deal. That’s what makes it so strange that Todd’s team, with the existing tenured employees that he has on his staff, just can’t seem to contribute in the same way that the other teams have.”

“It sounds like Todd came with an excellent background with a wealth of experience as a manager and engineer, and that the team was fully behind his hiring,” Cassandra summarized. “With those qualifications, under the circumstances what leads you to think that he needs management coaching?”

“Well, there’s management experience and there’s management at AeroTech. We have our own unique ways of doing things here. I think that Todd just needs to understand the Aero way specifically,” Patrick said.

“Tell me more about what you mean by the ‘Aero way.’ You’ve said that Todd’s group is missing deadlines and is over budget?”

“Right,” he said. “We ask each of our engineering managers to develop a quarterly plan that we use as commitments across the business. I take the product development timeline that they send to me, and I share it with marketing and sales so they know when to begin the major sales push. I send it to operations so they know what components and parts to order in advance of volume manufacturing. I use the financial commitments to share with our chief financial officer so that she can make revenue projections and calculate financial projections. My credibility rides on those commitments.

Todd’s projections are consistently inaccurate, which has caused problems, obviously, for the marketing, sales, and finance teams.”

“What do you think is causing the inaccurate forecast for budgets and delivery times?” Cassandra asked.

“There could be many things, but I have to say that when I was a manager of an engineering group, I could always come up with a realistic forecast,” Patrick reminisced.

“Maybe I didn’t always get it right, but even when I got a commitment from an engineer that it would take him 2 months to deliver, I always added 10 to 20% to the budget and cycle time, just to be safe. My group may not have been the fastest, but we were always within projections.” Patrick smiled.

“Is that a standard practice in most engineering environments?” she asked.

“Yes, it’s pretty typical in my experience,” Patrick said.

Cassandra looked through her notes. “OK. So let me summarize. There is a new manager with a team composed of new employees and tenured employees. That’s the newest team in the division and also the team with lowest productivity compared to other similar teams in the division. Specifically, Todd’s team is not producing products within his own projections of cycle time and budget. You’re asking me to conduct two interventions. One would be a training program for the engineers on Todd’s team that would teach time management, prioritization, and project management. A second intervention would be management coaching for Todd to help him better work through the management issues with his team, including cycle time and budget projections. Do I have that right?”

“That’s it exactly.” The phone rang on Patrick’s desk. “I’m afraid I have another meeting scheduled now. Is there any other information I can provide to help you get started?” “Perhaps. At this point, however, I’m not sure that the training and management coaching programs that you wanted me to work on are the right solutions to your problem.

I’m not exactly certain what the true problem is, but I have some ideas. I think I’d like to gather some additional data before I make a recommendation. How does that sound?” Cassandra asked.

“What kind of additional data do you want to gather? How long will that take?” he asked.

“I’ll tell you what. Why don’t I write up a short proposal that specifies the additional data I would like to gather, and I can explain what I think the data would tell us? I’ll include some of my thoughts about our roles in this project, including what I would need from you and what you can expect from me. I can send that to you within the next week.” “That sounds fine, but keeps in mind the time pressure we’re under here. I’ll look forward to hearing back from you,” Patrick concluded.