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**Advanced Engineering Project Management**

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**Chapter 3 HW:**

**P97 Horizon Consulting Case**

**Horizon Consulting**

Patti Smith looked up at the bright blue Carolina sky before she entered the offices of Horizon Consulting. Today was Friday, which meant she needed to prepare for the weekly status report meeting. Horizon Consulting is a **custom software** **development company** that offers fully integrated **mobile application services** for **iPhone™, Android™, Windows Mobile** and **BlackBerry** platforms. Horizon was founded by James Thrasher, a former Marketing executive, who quickly saw the potential for digital marketing via smartphones. Horizon enjoyed initial success in sports marketing, but quickly expanded to other industries. A key to their success was the decline in cost for developing smartphone applications which expanded the client base. The decline in cost was primarily due to learning curve and ability to build customized solutions on established platforms. Patti Smith was a late bloomer who went back to college after working in the restaurant business for nine years. She and her former husband had tried unsuccessfully to operate a vegetarian restaurant in Golden, Colorado. After her divorce, she returned to University of Colorado where she majored in Management Information Systems with a minor in Marketing. While she enjoyed her marketing classes much more than her MIS classes, she felt the IT know-how acquired would give her an advantage in the job market. This turned out to be true as Horizon hired her to be an Account Manager soon after graduation. Patti Smith was hired to replace Stephen Stills who had started the restaurant side of the business at Horizon. Stephen was “let go” according to one Account Manager for being a *prima donna* and hoarding resources. Patti’s clients ranged from high-end restaurants to hole in wall Mom and Pop shops. She helped develop smartphone apps that let users make reservations, browse menus, receive alerts on daily specials, provide customer feedback, order take-out and in some cases order delivery. As an Account Manager she worked with clients to assess their needs, develop a plan, and create customized smartphone apps. Horizon appeared to be a good fit for Patti. She had enough technical training to be able to work with software engineers and help guide them to produce client ready products. At the same time she could relate to the restaurateurs and enjoyed working with them on web design and digital marketing.

**Horizon was organized into three departments: Sales, Software Development, and Graphics, with Account Managers acting as project managers.** Account Managers generally came from Sales, and would divide their time between projects and making sales pitches to potential new clients. Horizon employed a core group of software engineers and designers, supplemented by contracted programmers when needed. The first step in developing a smartphone application involved the Account Manager meeting with the client to define the requirements and vision for the application. The Account Manager would then work with a Graphic User Interface (GUI) designer to come up with a preliminary story board of how the application would function and look. Once the initial concept and requirements were approved the Account Manager was assigned two pairs of software engineers. The first pair (app engineers) would work on the smartphone side of the application while the second pair would work on the client side of the application. Horizon preferred to have software engineers work in tandem so they could check each other’s work. The two app engineers would typically work full time on the application until it was completed while the other engineers would work on multiple projects as needed. Likewise, GUI designers would work on the project at certain key stages in the product development cycle when their expertise was needed. The head of Graphics manages the GUI designers’ schedule while the head of Software manages the software engineer assignments. At the end of each project Account Managers submitted performance reviews of their team. The Director of Sales was responsible for the Account Managers’ performance reviews based on **customer satisfaction, generation of sales, and project performance**. Horizon believed in iterative development and every two to three weeks Account Managers were expected to demonstrate the latest version of applications to clients. This led to useful feedback and in many cases redefining the scope of the project. Often clients wanted to add more functionality to their application once they realized what the software could do. Depending upon the complexity of the application and changes introduced once the project was under way, it typically took Horizon two to four months to deliver a finished product to a client. Patti was currently working on three projects. One was for Shanghai Wok, a busy Chinese mom and pop restaurant located in downtown Charlotte, North Carolina. The owners of Shanghai Wok wanted Horizon to create a smartphone app that would allow customers to order and pay in advance for meals they would simply pick up at a walk-up window. The second project was for Taste of India that operated in Kannapolis, North Carolina. They wanted Horizon to create a phone app that would allow staff at the nearby bio-tech firms to order food that would be delivered on-site during lunch and dinner hours. The last project was for Nearly Normal, a vegetarian restaurant which wanted to send out e-mail alerts to subscribers that would describe in detail their daily fresh specials. James Thrasher was an admirer of Google and encouraged a playful but focused environment at work. Employees were allowed to decorate their work spaces, bring pets to work, and play ping pong or pool when they needed a break. Horizon paid its employees well but the big payoff was the annual Christmas bonus. This bonus was based on overall company profits, which were distributed proportionately based on pay grade and performance reviews. It was not uncommon for employees to receive a 10–15 percent boost in pay at the end of the year.

**STATUS REPORT MEETING**

As was her habit Patti entered the status report meeting room early. David Briggs was in the midst of describing the game-winning catch John Lorsch had made in last night’s softball game. Horizon sponsored a co-ed city league softball team which most of the Account Managers played on. Patti had been coaxed to play to ensure that the requisite number of “females” were on the field. She balked at the idea at first; softball wasn’t really her sport, but she was glad she did. **Not only was it fun, but it gave her a chance to get to know the other managers.** James Thrasher entered the room and everyone settled down to business. He started off as he always did by asking **if anybody had important news to bring to everyone’s attention.** Jackson Browne slowly raised his hand and said, “I am afraid I do. I just received notification from Apple IOS that they have rejected our TAT app.” TAT was a phone app that Jackson was the project lead on that allowed subscribers to reserve and see in real time what swimming lanes were available at a prestigious athletic club. This announcement was followed by a collective groan. Before an Apple app could go operational it had to be submitted and approved by Apple. Usually this was not a problem, but lately Apple had been rejecting apps for a variety of reasons. Jackson went on to circulate the list of changes that had to be made before Apple would approve the app. **The group studied the list**, and in some cases ridiculed the new requirements. Ultimately, James Thrasher asked Jackson **how long it would take** to make the necessary changes and resubmit the app for approval. Jackson felt it would probably take two to three weeks at most. Thrasher asked who the engineers that worked on this project were. Patti’s heart fell. **One of the app engineers who had developed the TAT app was working on her Shanghai Wok project.** She knew what was going to happen next. Thrasher announced, “OK everyone, i**t only makes sense that these engineers are the best ones to finish what they had started so they are all going to have to be reassigned back to the TAT project.** Those affected are going to have to get together after this meeting and figure how you are going to replace them.” Th**e meeting then proceeded as planned with each account manager reporting the status of their projects, and sharing relevant issues with the group.**

**POST-MEETING**

As everyone filed out, Patti looked around to see who else was in her same boat. There were three other Account Managers as well as Jackson Browne. Resource assignments were a reoccurring issue at Horizon given the nature of their work. Horizon had developed a policy where **decisions were made based on project priority**. Each project was assigned a Green, Blue or Purple designation based on the company priority. Priority status was based on the extent the project contributed to the mission of the firm. **The Shanghai Wok project given its limited size and scope was a Purple project, which was the lowest ranking**. The list of available software engineers was displayed on the big screen. Patti was only familiar with a few of the names. **Leigh Taylor who had the only Green project immediately selected Jason Wheeler from the list.** She had used him before and was confident in his work. **Tom Watson and Samantha Stewart both had Blue Projects and both needed to replace a mobile app engineer.** They both immediately jumped on the name of Prem Mathew, claiming he was the best person for their project. After some friendly jousting, Tom said, “OK, Sam, you can have him; I remember when you helped me out on the Argos project; besides my project is just beginning. I’ll take Shin Chen.” Everyone looked at Patti; she started by saying, “You know, I am only familiar with a few of these names; I guess I’ll go with Mike Thu.” Jackson interjected, “Hey everyone, I am really sorry this happened, and I am sure Mike is a good programmer, but I recommend you work with Axel Gerthoff. I have used him before, and he is a very quick study and a joy to work with.” This was a relief to Patti and she quickly took his advice. They left to submit a report to Thrasher detailing the decisions they each had made and the impact on their project.

1. **How successful was the post-meeting?**

This post-meeting was successful in the human resource allocation. Each project was assigned by three colors based on the company priority helped managers choose the most suitable candidate for the project. The account managers made a quick agreement and helped each other to choose the programmer who will be helpful for the project. The most important thing was they focused on the engineers’ experience and ability. The decisions and strategies will probably let the engineers get into the right projects and finish in short time.

**2. What factors contributed to the success or failure of this meeting?**

The factors contributed to the success of this meeting due to the good management structure and organizational culture. The management structure let the managers know the size of project, need for integration, budget and time constraints quickly and help them to choose strategies and suitable engineers in an efficient way. The good organizational culture let managers communicate in a friendly situation and solve problems together. They not only focus on their own projects, but also give each other advice and recommend the right engineers.

1. **What kind of project management structure does Horizon use? Is it the right structure? Explain.**

The Horizon is using the matrix organizational structure. Horizon was organized into three departments: Sales, Software Development, and Graphics, with Account Managers acting as project managers. The head of Graphics manages the GUI designers’ schedule while the head of Software manages the software engineer assignments. At the end of each project Account Managers submitted performance reviews of their team. The Director of Sales was responsible for the Account Managers’ performance reviews based on customer satisfaction, generation of sales, and project performance. The engineers who followed with the projects managers all from the three branches. Someone only work for one project, someone work for multiple projects.

I believe it is the right structure for Horizon. In the matrix organizational structure, project participants report simultaneously to both functional and project managers, and matrix structure optimizes the use of resources. It allows for participation on multiple projects while performing normal functional duties, and achieves a greater integration of expertise and project requirements. This structure is good for company to create and finish projects efficiently and flexibly. It also has a strong project focus and easier post-project transition and all of these advantages will be helpful in achieving the goal of Horizon.