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**Part 1: Project Budget (Cost Management)**

1. Explain your approach to estimating the project cost (e.g., top down, bottom up, etc.) and why that method was chosen.

The project cost was estimated through a fairly standard approach as dictated by a bottom-up approach. This approach was more than suitable for the type of project at hand and the resources involved. In IT work and network setup, you first get an overall view of the setup and systems at hand, or those desired, and you can then make tangible projections of what equipment is needed and what kind of setup is involved in configuring those systems. Based on previous and/or similar experience in setup (like needs, similar amount of systems, etc.) you can fairly easily “predict” what will best work for another client of similar needs. In this case, a network of 15 total systems and their included components could be determined, purchased, and allocated hours needed to be installed and configured. Outside work was contracted at a set package rate making the IT-setup easy to focus on and stay on track. Team input is also relied on and valued in this approach, and for this setup much of the decision making was left in the hands of the product team members with final approval and authorization coming from the project manager. In this approach, team members are empowered to think creatively and are given the reins to make decisions as they see fit to accomplish milestones and work packages; this is vital in a setup such as this – e.g. take necessary steps to configure server hardware and software to suit client needs.

1. Create a table that shows the original budgeted cost (from the charter) and the actual budgeted cost (side by side). Include line items for labor, materials, contract, equipment, travel cost, and so on.

|  |  |  |  |
| --- | --- | --- | --- |
| Estimated Labor | $20,000 | Actual Labor | $19,705 |
| Estimated Materials | $7,500 | Actual Materials | $2,000 |
| Estimated Contractors | $5,000 | Actual Contractors | $6,000 |
| Estimated Equipment | $50,000 | Actual Equipment | $42,800 |
| Estimated Travel | $2,500 | Actual Travel | $0.00 |
| **Total Estimated Cost** | $85,000 | **Total Actual Cost** | $70,505 |

1. Compare the budget from the charter to the final budget and explain any variances that occurred from your original budgeted cost in the project charter and the current project cost (include your original estimated cost for the project).

The budget from the Project Charter was considerably higher. At a projected $85,000 budget to start with, the estimated total cost was about 17% higher than the final budget dictates. First of all, labor costs were pretty much spot on. Considering there are various “steps” involved in ordering, installing, and ultimately configuring network equipment it is generally pretty easy to determine how many man hours are needed to accomplish the tasks involved in each work package. Materials cost were projected to be much higher than final costs pin them at, and this is mostly attributed to some overhead being projected for contingency and also integrating some of the costs into additional contractors costs. Contractors came out at $1,000 more than projected because we are allowing them to handle every facet involved in camera equipment installation and setup. This flat fee package helped us save on costs like materials fees and also additional labor costs on our end. Equipment budget came out $7,000 under estimated budget which falls within a good range in balancing performance/needs/budget. We managed to include all equipment desired and determined in the scope of the project while still leaving some room for overhead or potential issues that may arise. Travel costs were projected as more of a contingency plan for damaged products, expedited shipping, and so on. It was also not known at the time how contractor fees would pan out and if they would require any special payment or arrangement for travel.

1. Explain your budget contingency plan and how much is budgeted for contingency.

Essentially all unused budget can end up being applied to a contingency reserve. This allocates nearly $14,500 in remaining budget to be funded towards the project’s contingency. It is imperative that this project finishes on schedule considering that it involves an everyday, operating business. The fact that we are replacing their entire computer network means they will potentially be without access to these systems, jeopardizing and/or greatly impeding business activities during this time. This contingency fund may even be applied to crashing the project in order to compress the project schedule if the client so desires. If not, all contingency can be preserved for a worst-case scenario, such as inclement weather conditions delaying aspects of setup and other various delays such as building structure issues or repairs needed to allow proper function of the systems being installed. All in all, considering the budgeted and projected costs, there will most likely be a decent amount of budget remaining even after contingency. This project is more than likely to successfully complete on time and under budget.

**Part 2: Resource Management**

1. Explain the results of your resource assignments. Did you assign enough people to the project? Were there any resources over-allocated? What approach will you take to fix any allocation problems?

Considering that all aspects of the budget came out less-than-projected, I would eagerly say that resource assignments were perfectly allocated for this project. The driving factor in this project is schedule. Again, it is imperative that this business’s operations be minimally impacted by new network setup. In addition, it is critical that the projected timetable for the setup is completely accurate as it affects not only the business itself but also all of its customers as well. In order to meet and stay within the projected schedule, resources such as hourly employees had to be assigned a strict timetable and duration for each task attributed in their respective work packages. The fact that the project was under budget but labor costs were exact (when comparing estimated to actual) indicates that there is no wiggle room in labor allocation. It can easily be determined from the budget comparison that the only resource over allocation came in the original projected materials budget. In actual implementation, though, this cost was simply moved to contracting with the rest going to projected contingency. Aside from the scope of the project, more allocation could possibly be attributed to labor in order to crash the schedule and minimize business downtime. The fact that labor is on a strict timetable and only 2-3 employees are working on the project really emphasizes a high value being placed on each worker.

1. Develop a plan to manage your project team and define how you will motivate your team and how you will handle team conflicts.

Open lines of communication are first and foremost at the root of developing a management plan in a project of this nature. From the start, it must be emphasized that communication makes this project successful. By involving the project team in critical decision making processes, they become empowered and possess a notion that their input is vital to each of their respective tasks and work packages. In some cases, as dictated by the WBS, some tasks simply cannot be started until its predecessor/s is complete. This gives each team member a heightened sense of responsibility and causes them to feel that the work they do makes an actual difference in the project proceeding to each and every following step.

Any potential conflict directly impacts the other team member/s. Since the project manager oversees only two assigned team members on this project, each team member holds essentially a 50% stake in the project’s success. This emphasizes the transparency that needs to exist in an environment like this. There simply cannot be persistent, negative conflict – the project does not have the resources to spare. First, any conflict must be acknowledged amongst the team members (through open lines of communication) and then the project team must discuss the impact of any conflict. A cooperative process must then be developed that allows each team member and their respective work packages to carry-out as is dictated for the project schedule. Due to the nature of these systems and how they interoperate, each team member needs to closely work with one another and be open and honest about expectations for how each other’s system will function with their own. Through this open communication, positions can be clarified and facts about project expectations can be listed. An agreement can then be reached after this analysis to ensure project flow continues appropriately.

1. What structure would you select for your project: functional, weak matrix, balanced matrix, strong matrix, or pure project? Why?

For this project I would select pure project as the organization method. I believe that pure project has many strong points that tie directly in to what this project needs and provides a platform for it to flourish. For example, in this project there will be one appointed project manager that has full authority over the project, and each team member is directly responsible to this manager. The project team in a pure project also has a strong identity (in this case, each to their respective field/specialty in regards to its proper implementation) and a high level of commitment. Since there are only two members and one manager in this project, it is imperative that this commitment exists – the members often will need to work together to make informed decisions about their system/s that will directly tie into and affect the others. Another key point in why pure project suits this project is that the project team is structurally simple which makes it easy to implement. Tasks can be easily assigned to each respective specialist and lines are not blurred in who is performing which task/s. In addition, a holistic view is placed on the project in this method of organization, which is exactly what needs to occur during network setup. Each aspect directly ties into the next, and together an overall and cohesive system is created. A project of this nature is also repetitive in a sense that once the amount of pieces needed are determined, a network setup usually entails many similar aspects from one project to another. A pure project allows for successive similar projects to more easily be executed thanks to its structure and the fact that experts skilled in a particular area or skill are assigned to these projects.

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