

Continuing Integrative Class Project

It is now time to construct the project schedule. You may do this by hand or using a software package for project management as mentioned in Chapter 1. Begin with your WBS and determine the precedence relationships among the activities at the most detailed level of your project's WBS. Next, develop the three time estimates for each activity. Based on the precedence

relationships and time estimates, create a network diagram for your project. Develop a simulation model for your project and determine the distribution of project completion times for your project. Finally, analyze your project and determine what deadlines will provide you and your team a 75 percent and 90 percent chance of completing the project on time.

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The following case presents a real project (in aggregate form) that allows the student to compare the critical path solution approach for both completion time and cost as well as a simulated solution for time variability and then also for both time and cost variability. The student should better understand the risk of projects running late and overbudget after this exercise.

Case

NutriStar Energy, Inc.⁹ S. Shafer

Wesley James had recently arrived in Boston from Manchester, UK for a position as Project Owner at NutriStar Energy, Inc. He was now meeting with Ava Smith, President of NutriStar, to discuss his upcoming duties and responsibilities associated with their latest product, the Nutri-Sports Energy Bar.

As Ava explained: "NutriStar produces a line of vitamins and nutritional supplements. We recently introduced our Nutri-Sports Energy Bar, which is based on new scientific findings about the proper balance of macronutrients in the body. Fortunately, the energy bar has quickly become popular among elite

athletes and others who focus on eating an optimal balance of macronutrients. One distinguishing feature of the Nutri-Sports Energy Bar is that each bar contains 50 milligrams of eicosapentaenoic acid (EPA), a substance strongly linked to reducing the risk of cancer but found in only a few foods, such as salmon. We were able to include EPA in our sports bars because we had previously developed and patented a process to refine EPA for our line of fish-oil capsules."

"Because of the success of the Nutri-Sports Energy Bar in the United States, we are considering offering it in Latin America. With our domestic facility currently operating at capacity, we have decided to investigate the option of adding approximately 10,000 square feet of production space to our facility in Latin America, at a cost of \$5.1 million."

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