2.2: Project Profiling Models

Learning Objective

1. Identify different methods of typing projects.

Aaron J. Shenhar and Dov Dvir (Shenhar & Dvir, 1996) developed a typology—classification or profile—of engineering projects that reflected two dimensions. The first dimension reflected the technological uncertainty and ranged from low tech, medium tech, and high tech to super high tech. Although projects involve the use of various levels of technology, Shenhar and Dvir develop criteria for each type of technological uncertainty that enabled the project to be typed. The second dimension reflected the system scope. The system scope dimension ranged from assembly projects that dealt with building a single component, to system projects that included interactive elements, to array projects that included a wide dispersal of interactive systems and subsystems.

Shenhar and Dvir observed that the project execution approach was connected to the project type. The study identified different management patterns associated with project type as well as different management tools and practices. As the project system scope became more complex and the system scope of the project became larger, more sophisticated management tools were put in place to reduce project uncertainty. As project technology increased, project managers became more invested in processes to manage technical issues such as redesign and testing. As projects increased in system scope, project managers became more invested in formal planning and control issues. In later research, Shenhar (Shenhar, 1999) developed recommendations for adjusting the project management approach based on the project typology—systematic classification or profile. For example, project managers will use more risk management techniques (see Chapter 11 “Managing Project Risk” on risk management) when the technological uncertainty is high.

Robert Youker (Youker, 1998) identified basic differences in project types. Among the attributes he used were the uncertainty and risk, level of sophistication of the workers, the level of detail in the planning, the newness of the
technology, and the time pressure. Youker also looked at project size, duration, industrial sector, geographic location, number of workers, cost, complexity, urgency, and organizational design as attributes that help determine a project profile.

**Key Takeaways**

- The typology of Shenhar and Dvir characterized projects based on the attributes of technological uncertainty and complexity of scope.
- Youker used the attributes of uncertainty and risk, sophistication of workers, planning detail, industrial sector, location, number of workers, cost, complexity, urgency, and organizational design.

**Exercises**

1. The typology of Shenhar and Dvir used attributes of technological ____________ and project scope.
2. The typology of Youker used several attributes, including the ________ of workers.
3. What are the two attributes of a project that Shenhar and Dvir used to characterize projects?

**Simple versus Complex Profiles**

Simple profiles are easier to use than profiles that consider many attributes. Compare the profiling method of Shenhar and Dvir with the profiling method of Youker. Address the following issues:

- Which profiling method would be faster and easier to communicate to team members? (Explain your choice.)
- Which attributes used by Youker but not used by Shenhar and Dvir do you think are important? Explain your answer and give an example of a situation where consideration of the attribute would make a difference to the project.

**References**

