

ITEC451
Activity 1
(As a group of three or four team members)

When an organization's problem is solved, the following seven-step model-building procedure should be followed:

1. Formulate the Problem
 - ☐ Define the problem.
 - ☐ Specify objectives.
 - ☐ Determine parts of the organization to be studied.
2. Observe the System
 - ☐ Determine parameters affecting the problem.
 - ☐ Collect data to estimate values of the parameters.
3. Formulate a Mathematical Model of the Problem
4. Verify the Model and Use the Model for Prediction
 - ☐ Does the model yield results for values of decision variables not used to develop the model?
 - ☐ What eventualities might cause the model to become invalid?
5. Select a Suitable Alternative
 - ☐ Given a model and a set of alternative solutions, determine which solution best meets the organizations objectives.
6. Present the Results and Conclusion(s) of the Study to the Organization
7. Implement and Evaluate Recommendations

Suggest the seven-step model-building procedure to develop the following police patrol scheduling system (PPSS).

- Taylor and Huxley (1989) developed a police patrol scheduling system (PPSS).
 - ☐ All San Francisco (SF) police precincts use the PPSS to schedule their officers.
 - ☐ It is estimated that the PSS saves the SF police more than \$5 million annually.
 - ☐ Other cities have also adopted PPSS.
- Following the seven-step model here is a description of PPSS.