16CSCI08I
Software Project Management

Lab (7)

Risk Management

Exercises:

1.

We will assume that a certain project depends on a data center vulnerable to fire. It is estimated that if a fire occurred, a new computer configuration could be established for $500,000. It is also estimated that where a computer is located there is a 1 in 1000 chance of a fire actually happening.

Calculate the risk exposure for the current situation.

2.

A potentially risky situation involves the software for an experiment with a satellite. The experiment team understands the application well (experiments with satellites), however, is not very experienced with software development. The satellite platform manager has obtained an estimate that there is probability of 0.4 that the software will have a critical error that will wipe out the entire experiment and cause an estimated loss of the total investment in the experiment of $20 million. There are two major options for the manager for reducing the risk:

A. Apply better development methods at negligible cost to the team (has been found with earlier experience) and manager estimates that this will reduce the error probability to 0.1.

B. Hire a contractor to independently verify and validate the software at an additional cost of $500,000. Based on previous experience with this contractor, this will reduce the error probability to 0.04.

Determine the risk exposure for each of the choices and make a decision as to the path to take.

3.

Mo is a systems analyst who is gathering requirements for an application, which will record details of the training undertaken by fire fighters in the client fire brigade. Details of the training units successfully completed by fire fighters are to be input to the application by trainers who are themselves senior and active fire fighters. Mo needs to interview a trainer to obtain his/her requirements. Because of the senior fire fighters' other duties the interview has to be arranged in 2 weeks in advance. There is then a 20% chance of the fire fighter being unable to attend the interview because of an emergency call out. Each week that the fire is delayed causes the brigade approximately $1000.

Provide an estimate for the risk exposure (as a financial value) for the risk that the senior fire fighter might not be able to attend at the times needed.

Example on RRL:

http://www.omsar.gov.lb/ICTGPG/Web/20.8_Risk_Reduction_Leverage_(RRL).htm