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RESEARCH ARTICLE

SCENARIO AND RISK MANAGEMENT IN A PROJECT.

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Abstract

Probabilistic risk assessment (PRA) has been traditionally applied to risk assessment of physical systems, to name a few, from nuclear power plants, chemical power plants, railroad and transport facilities to information security. The journal attempts to inculcate PRA to project management. It also establishes the quantitative risk assessment by PRA, more specifically focusing on the condition of schedule planning of a project.

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Introduction:-

Probabilistic Risk Assessment (PRA) is a brilliant tool for analyzing the safety risks of physical systems such as nuclear power plants, chemical power plants, transport facilities, etc. The study of PRA was identified publically in 1975 with WASH-1400 as the code name. When an accident categorization is identified, as an analogy, an explosion, a plethora of steps, scenarios, series and conditions exist before the occurrence of the accident. In an attempt to quantify the risks, it is important to enumerate these scenarios and quantify the same. The same can be applied to information security and project management.

PRA consists of event trees and failure trees. While failure trees are focused with analyzing the causes of functional failure, event trees are the key tool for enumerating the accident scenarios. The event tree is a decisive tree that begins from the initiating event and finally reaches success or failure. The accident scenario of each individual initiating event is enumerated with the help of event trees that start from the initiating event.

Scenario management:-

The course of the plan collapse of schedule plan, staff plan, quality plan and delivery plan.

Staff plan collapse:-

The course of the cost plan collapse is as listed-

1. As the number of system engineers who are familiar with the work was little, the project plan depended on the staff of Partner Company.
2. Due to the flaw, the delivery to the client was frequently delayed. The deadline was at the beginning of April. However, the main-hour of the system engineers from the partner company was overflowing due to trouble resolution and interactive correspondence. Due to flaw of the project, new tasks kept accumulating, which eventually led to lack of Key Men who could design with a sound knowledge of specifications? Thus, the staff plan collapsed.

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Schedule plan collapse:-

The course of the schedule plan collapse is as listed-

1. Ineffective charting of schedule plan considering the possibilities.
2. Stake holders were given an unrealistic set of goals and time frames to the team.

Delivery Plan Collapse:-

The course of the delivery plan collapse is as listed-

1. No documented inspection acceptance was obtained from the client.
2. System test identified several bugs in generated file.
3. Modification program had to be coded to rectify the bugs, which in turn resulted in incremental man hour requirement.
4. The negotiation with the client for increment of staff broke down.
5. Due to lack of members, the delivery due was not tracked. Thus, the delivery plan collapsed.

Quality plan collapse:-

The course of the quality plan collapse is as listed-

1. The implementation test did not encompass all the real jobs; it was carried out by sampling the weekly, monthly and annual jobs on the ordinary online.
2. The test was coding by the Inspect Instructions of PC Cobol. The middleware caused Abed after a few hours of uninterrupted working. Abed Dump was obtained, and Dump identified the cause after analyzing. If implementation test encompassed all the real jobs, the Abed could be evaded. Without using Inspect, PC COBOL was re-coded as a recovery option. As a result, medical accounting jobs recovered, however, the timeline was long and the work came to a standstill. Thus, the quality plan resulted in collapse.

Application of pra to pm:-

In order to apply PRA to Project Management, it is essential to define the accident and differentiate the initiating event for the occurrence of the accident. In this scenario, the initiating event is the key factor that triggers the accident. Further, the accident scenario is enumerated with the help of event trees. In the end, the event probability of each scenario is calculated.

Merits

The credible merits of the application of PRA to PM are as given below-

1. Accident scenarios can be enumerated using event trees.
2. The risk can be assessed with a dual approach. One, by combining the event probability of the scenario and two, by the degree of the influence.
3. The risks can be accessed individually, for each scenario.

Issue of uncertainty:-

In a couple of previous sections, the scenarios of collapse of various plans, such as schedule plan, quality plan, staff plan and delivery plan were enumerated.

In addition to that, the scenarios with high event probability to fail were able to be extracted. However, the glitch is that, these event probabilities of the main collapse are only qualitatively presumed, i.e., they have elements of uncertainty. Consequently, the journal attempts to examine the uncertainty of the accident scenarios of the collapse of schedule plan, quality plan, staff plan and delivery plan.

Analogy of application of PRA to PM:-

Scenario of scheduling plan collapse

Scenario 1: After the submission of the in house design an oral acceptance was received from the client .No document inspection was received from the client. The bugs in the generated file are detected by the system test. To correct these bugs, increase in man-hours is required to create a modification program. This leads to added costs, increase in man hour and delayed delivery. The client breaks the negotiation.The contingency budget is not secure.

Scenario 2: After the submission of the in house design an oral acceptance was received from the client .No document inspection was received from the client. The bugs in the generated file are detected by the system test. To correct these bugs, increase in man-hours is required to create a modification program. This leads to added costs, increase in man hour and delayed delivery. The client breaks the negotiation.The contingency budget is secure.

Scenario 3: After the submission of the in house design an oral acceptance was received from the client .No document inspection was received from the client. The bugs in the generated file are detected by the system test. To correct these bugs, increase in man-hours is required to create a modification program. This leads to added costs, increase in man hour and delayed delivery. The client does not break the negotiation.

Scenario 4: After the submission of the in house design an oral acceptance was received from the client .No document inspection was received from the client. The bugs in the generated file are detected by the system test. To correct these bugs, increase in man-hours is required to create a modification program. This leads to added costs, increase in man hour and delayed delivery. The client breaks the negotiation. But it can be ignored as it is not necessary to finish the project.

Scenario 5: After the submission of the in house design an oral acceptance was received from the client .No document inspection was received from the client. No bugs in the generated file were detected by the system test.

Scenario 6: After the submission of the in house design an oral acceptance was received from the client .No document inspection was received from the client. The bugs in the generated file are detected by the system test. To correct these bugs, increase in man-hours is required to create a modification program. This leads to added costs, increase in man hour and delayed delivery. The client breaks the negotiation.The contingency budget is not secure.

Scenario 7: After the submission of the in house design an oral acceptance was received from the client .No document inspection was received from the client. The bugs in the generated file are detected by the system test. To correct these bugs, increase in man-hours is required to create a modification program. This leads to added costs, increase in man hour and delayed delivery. The client breaks the negotiation.The contingency budget is secure.

Scenario 8: After the submission of the in house design an oral acceptance was received from the client .No document inspection was received from the client. The bugs in the generated file are detected by the system test. To correct these bugs, increase in man-hours is required to create a modification program. This leads to added costs, increase in man hour and delayed delivery. The client does not break the negotiation.

Scenario 9: After the submission of the in house design an oral acceptance was received from the client .No document inspection was received from the client. The bugs in the generated file are detected by the system test. To correct these bugs, increase in man-hours is required to create a modification program. This leads to added costs, increase in man hour and delayed delivery. The client breaks the negotiation. But it can be ignored as it is not necessary to finish the project.

Scenario 10: After the submission of the in house design an oral acceptance was received from the client .No document inspection was received from the client. No bugs in the generated file were detected by the system test.

Conclusion:-

Thus, Project risk management must be considered at the different phases of acquisition. In the beginning of a project, the advancement of technical developments or the response to threats presented by a competitors projects, may cause a risk or threat assessment and subsequent evaluation of alternatives (see Analysis of Alternatives). Selection of a response presented by technology options, or competitor threats are important applications of risk management. Once a decision is made, and the project begun, more familiar project management applications can be used. Using event trees, scenarios are established and studied in the paper. By using veteran PM, future PM work is supported and can be improvised.

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