A proposed risk assessment model for decision making in software management

ABSTRACT

Software organization faces operational, technical and strategic risk. Hence, risk assessment is an important part of the decision-making process of software activities. Software management process has gained relevant during the last years, however there is still growing need of developing an innovative models that can support software practitioners in making decision to assess operational, technical and strategic risk. Existing risk assessment models adequately provide valuable insights to software practitioners to identify and measure the magnitude of risks associated in software activities, but they do not provide decision making support to software practitioners in assessing operational, technical and strategic risk. Thus, the aim of this paper is to propose a risk assessment model to support decision making of software practitioners when they assess risk that occurs in software management process. The developed model also provides software practitioners with the required risk assessment process and components, when they assess risk in their organisation. Semi–structured interview was used to collect data using two case studies involving a panel of software experts and software practitioners. Data was collected based on risk assessment practices in their respective software organisations. The case study was analysed using descriptive and narrative analyses. Results from the case studies shows that the current practice of assessing risk in software organisations is not effective due to inadequate decision making support to software practitioners when they measure and quantify identified operational, technical and strategic risk.

Keyword: Risk; Risk assessment; Decision making; Software organisations; Software management