To: Engineering Communications

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Subject: Safety and Risk Podcast - Professional Development

Risk management is the acceptance of certain risk probability while considering what types of risk are most important to focus resources on lowering. The general public assesses risk qualitatively while technical professionals assess risk quantitatively. Risk management requires estimation of risk or hazard. Estimation of risk is not standardized and is therefore difficult to define. A general equation can be used to try to roughly define risk. Risk = likelihood x impact. Certain types of hazards and risk can be calculated by software. To determine the probability of a hazardous event occurring, a fault tree analysis can be used to visually show what events will cascade failure through the tree. This way certain events can be given more significance over others. Determining overall risk for aggregated quantitative data can be difficult because multiple inputs can share factors. If two inputs share some of the same factors it can be hard to measure the lowering of risk. Managing risk costs less at the beginning of a project rather than after a project has been mostly completed. Designing out risk should be kept as a priority throughout a project’s lifetime. This will result in efficient risk reduction.