

**TWENTY-TWO CRITICAL PITFALLS IN SIMULATION MODELING
AND HOW TO AVOID THEM**

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ABSTRACT

Simulation modeling is the most widely used operations research technique for designing new systems and optimizing the performance of existing systems. Yet, the education of many analysts is limited to vendor training or university courses that focus on how to use a simulation-software product. While such instruction is certainly important, we would argue that it is not, in general, sufficient for performing sound simulation studies. We will discuss 22 critical pitfalls that can result from not having an understanding of the entire simulation-modeling-and-analysis process. The talk concludes with a brief discussion of opportunities for addressing educational deficiencies.