

## PLANNING FOR SIMULATION PROJECT SUCCESS

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### ABSTRACT

Discrete Event Simulation (DES) can be a powerful tool to help companies make better decisions. However, just one incorrect application of simulation can leave a bad taste with project sponsors and can derail future simulation endeavors. What are appropriate uses for simulation? What type of model do you need and how will that drive the data that should be collected? This presentation will help you get your project started on the right foot by giving you tips on what things to consider before kicking it off.

### 1 INTRODUCTION

A successful simulation project begins way before the first entity or location is created in the simulation tool. There are many things to consider before any modeling takes place that can help make your simulation project a success. From making sure that you are using the right tool to answer the question to common mistakes made with data collection, the suggestions and tips given in this presentation are based on many years of practitioner experience.

### 2 PRE-PROJECT PLANNING

#### 2.1 Appropriate Uses for Simulation

Is simulation the right tool for your project? This presentation will reinforce times where DES is a good idea and will also cover cases where DES may not be the best approach.

#### 2.2 Operational vs Design Models

An operational (aka tactical) model considers short-term operations and relies heavily on historical data. A design (aka strategic) model is typically more concerned about future state. Which one to choose is greatly dependent on what types of questions the model is trying to answer and in turn will drive what data to collect, which subject matter experts to involve, and the appropriate level of detail of the model.

### 3 STARTING THE PROJECT

#### 3.1 Kick-off Meeting

Once the sponsor has decided to proceed with the simulation, this presentation will address several important steps to get the project started on the right foot. The kick-off meeting is where the model builder and customer (whether internal or external) can meet face to face and agree on the scope going forward. It's important to create some sort of specifications document, whether a full functional specifications document or a project charter, so that there is written record of what are the main questions that this model will try to answer. We will also cover other tasks such as touring the facility (for current state models), identifying subject matter experts, and making a data collection plan.

### **3.2 Data Collection Tips**

This presentation will list things to look for when gathering and analyzing data for your simulation project. We will also include tips on what to avoid based on mistakes made over decades of simulation experience.

## **4 SUMMARY**

This presentation will cover the many key steps and decisions that must be made to increase the chance of success for a simulation project. These steps have been collected over decades of practitioner experience and are the result of many project “lessons learned.”