

CORPORATE INFORMATION

Performance Asset Management - Functional Study and Model Execution

Introduction

Clockwork Solutions has the expertise, experience, technology, and methodology to execute projects that solve complex problems in asset management. Asset management simulation and modeling projects are normally executed in two phases – Functional Study and Model Execution, though under certain circumstances they can be combined together.

The first phase is a Functional Study whose goal is to identify the business objectives and then determine the technical requirements and effort required to meet those business objectives. The second phase is the detailed executions of the identified model. The customer benefits from the two-phase approach by reducing project risk and controlling scope.

The Functional Study usually consists of five activities:

- Identify Technical /Business Expectations
- Develop Model Basis
- Identify Remaining Data/Logic Requirements
- Identify Costs/Resources
- Report

The Model Execution usually consists of four activities:

- Data Filtering and Analysis
- Model Construction and Verification
- Model Validation, Analysis and Interpretation
- Final Review



Functional Study Activities

Identify Technical/Business Expectations

One or more meetings are held to determine project expectations. The client's overall technical and business objectives are identified. The client provides information to Clockwork including process flow diagrams, equipment lists, failure and repair data, operating and maintenance rules, and a description of equipment interactions.

Develop Model Basis

Clockwork creates a “first pass” reliability block diagram model of the system. Equipment to include in the model, the criticality of that equipment, redundancy, and the effect on the system if the equipment fails is identified. Operating logic or rules that define interactions among the equipment is identified. This becomes the basis for the model created during the execution phase.

Identify Remaining Data/Logic Requirements

Clockwork identifies what additional effort would be required to fully develop data and logic that would be used during more sophisticated modeling.

Identify Cost/Resources

Using the detailed definition of the system, knowledge of available data, and the client’s objectives, Clockwork determines the costs and resources required for the Model Execution phase.

Report

The output of the Functional Study is a report issued to the client. The report provides the basis from which a detailed model of the system can be constructed. It also provides firm estimates of cost and resources required for options that would be executed during the model development phase.

Model Execution

Once the path forward has been chosen from the options identified in the Functional Study, the following activities are undertaken during the model execution.

Data Filtering and Analysis

This task consists of detailed data collection, filtering and analysis of the equipment failure and repair distributions.

Model Construction and Verification

Clockwork develops an ENRiCO™, STORM, or SPAR™ model of the system. This model incorporates the reliability block diagram representing the system, data, and custom logic that defines how each component affects the system.

Model Validation, Analysis, and Interpretation

Clockwork runs the model to answer the questions as determined during the Functional Study. The output of the various model runs will be incorporated into a report that will be delivered to the client.

Final Review

Clockwork conducts meetings with the client project team to present results.

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