ANALYSIS PHASE

Purpose: The Analysis Phase models and records the business data and activities within the scope of the analysis. The resultant diagrams and matrices are designed to be understood by management, end users, and IT personnel, and to increase communications among these groups. The analysis model is a model of the business, not a system model. It will facilitate the subsequent design phases and contribute to NWSC's information architecture.

Life of the Phase: The phase begins upon completion of the Investigation Phase. At the end of this phase the External Design Phase begins.

The analysis process develops a conceptual information model of the analysis area using the Information Engineering techniques of *Data Analysis, Activity Analysis,* and *Interaction Analysis*. The analysis process focuses on what the business does, rather than how it is done, which is considered later during design.

Clarification: The first three steps of the Analysis Phase are performed concurrently and iteratively. In addition, these may be performed again during subsequent steps or phases if the analysis model is incomplete, incorrect, or mode obsolete by changes in the business. The model should be developed in close collaboration with the customer. A thorough analysis effort is highly dependent on the commitment of the business sponsor and customer/end users.

STEP 1: Perform Data Analysis

Within the scope of analysis, depict the fundamental things with which the business deals and their interrelationships. Define *entity types* and their *relationships* and *attributes*, and construct an *entity-relationship model (data model),* consisting of an Entity-Relationship Diagram and supporting documentation.

STEP 2: Perform Activity Analysis

Within the scope of analysis, depict the things the business does, using the techniques of *Process Decomposition* and *Dependency Analysis*.

A. Process Decomposition

Decompose each function within the scope of analysis into lower functions and processes until all the lowest-level processes, elementary processes, are identified. Record the decomposition in an Activity Hierarchy Diagram. Document each element process.

B. Dependency Analysis

Verify the process decomposition by identifying dependencies between sibling processes, i.e., those having the same parent process. Record the dependencies in a Process Dependency Diagram. Identify any events that trigger the execution of processes and any