In RUP Design Model comes after Analysis Model; and similarly Data model is also important for the generation of design model according to RUP documentation. Data model should support architecturally significant scenarios.

Non-RUP sources suggest the following steps:

1-Identify entity types

An entity type could represent a collection of Crisis, incidents, things, Volunteer, or Manager

2-Identify attributes

Each entity type will have one or more data attributes. For e.g., for Incident in can be location, severity.

3-Apply naming conventions

Standards and guidelines applicable to data modeling.

4-Identify relationships

Defining one-one, one-many, and many to many relationships.

5-Apply data model patterns

Data model patterns describe solutions to common domain issues. (not sure, which one to apply)

6-Assign keys

There are two options, while applying key. Natural or custom defined.

7-Normalization

Its critical, and must be applied to reduce data redundancy. (1NF, 2NF, 3NF)

8-Denormalize to improve performance

Denormalize help to configure portions of data schema, in order to improve database access times.

Source: http://www.agiledata.org/essays/dataModeling101.html#HowToDataModel