



# Module 8

## Developing Business Data Models

### Lesson 2: Analyzing Narrative Problems



# Lesson Objectives

- Explain goals and steps of narrative problem analysis
- Apply steps on a practice problem
- Reflect on limitations of narrative problem analysis



# Goals of Narrative Problem Analysis

## Consistency

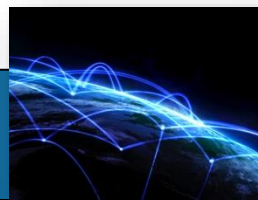
- No conflicts with narrative
- No rewriting of narrative

## Identify limitations

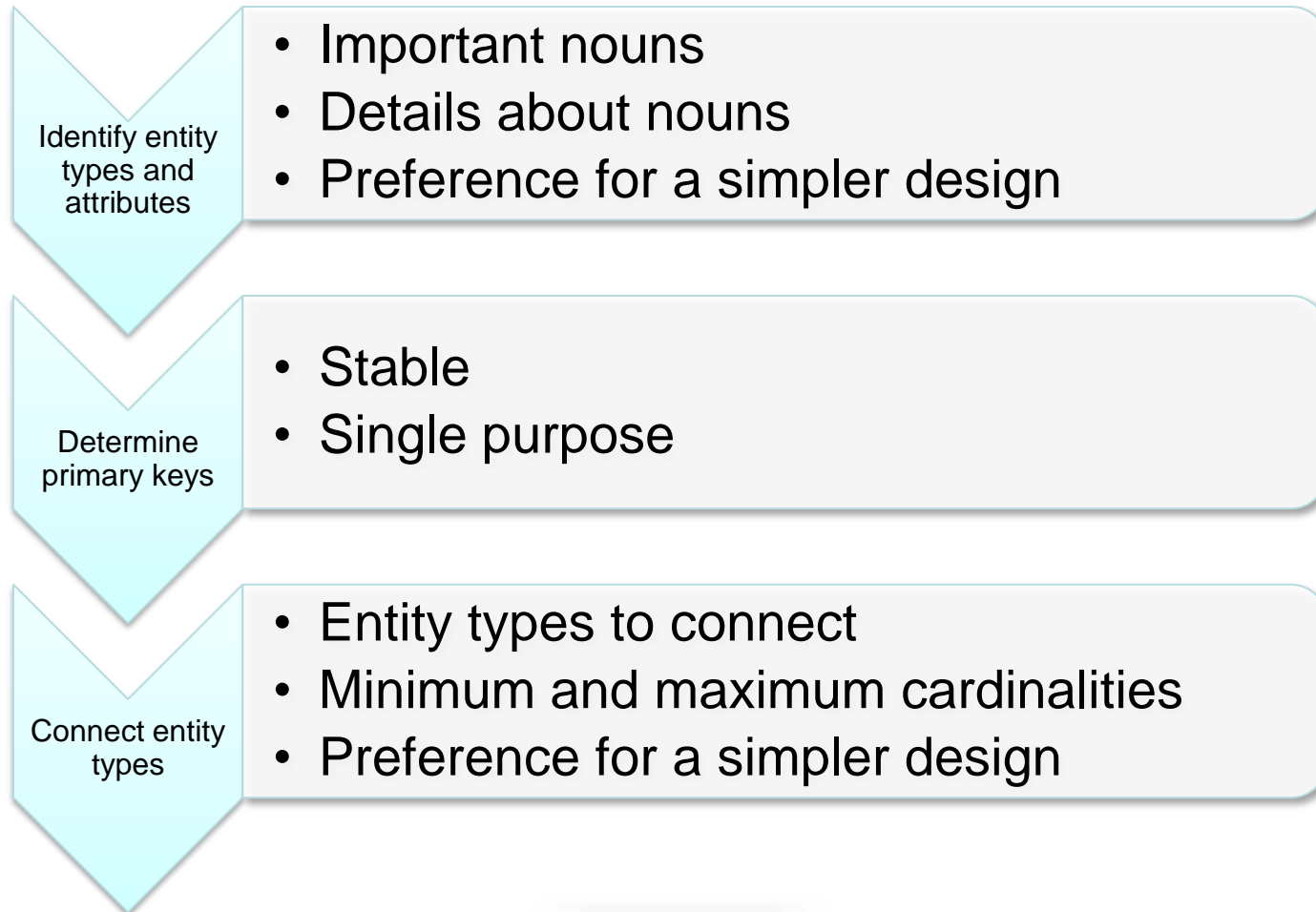
- Missing details
- Ambiguity
- Inconsistency

## Simplicity

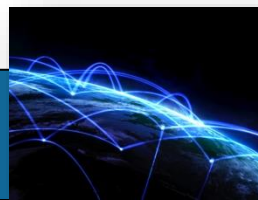
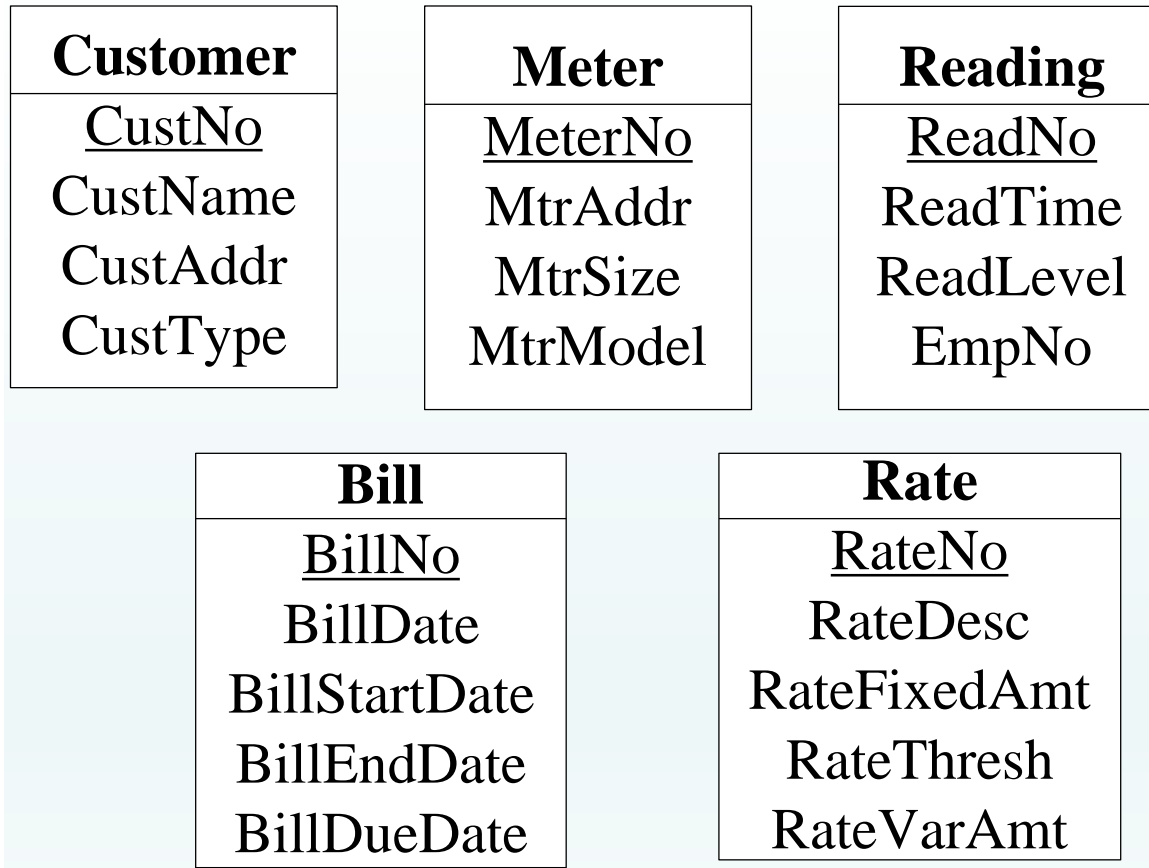
- Prefer simpler designs especially initially
- Suggest refinements



# Steps of Narrative Problem Analysis



# Problem Narrative Example (I)



# Government Identifiers

- Widely used for tax returns and government benefits
- Avoid for primary keys
  - Privacy concerns
  - Prohibited by organization policies
  - Sometimes violate single-purpose tenet
- May need to store as an attribute for government compliance

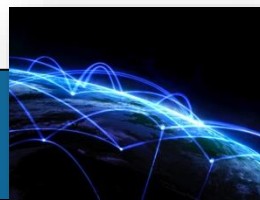
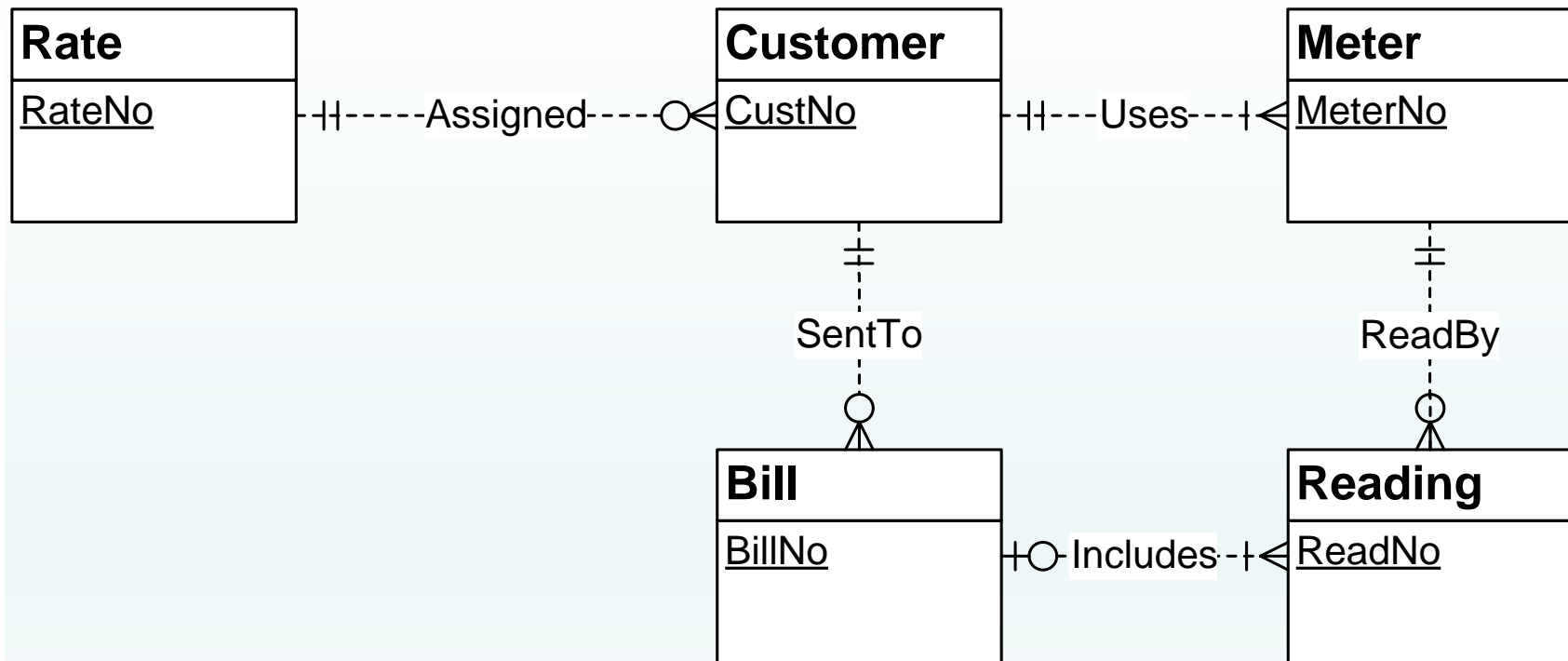


# Adding Relationships

- Examine sentences linking nouns representing entity types
- Sentences that involve an entity type having another entity type as a property
- Sentences that involve an entity type having a collection of another entity type



# Problem Narrative Example (II)





# Relationship Simplification

- Problem statement requires direct or indirect connections
- Hub entity types to simplify
  - Connect other entity types
  - Sometimes associated with important documents
  - Reduce number of direct connections



# Summary of Data Modeling Strategies

- Strive for consistency with the narrative
- Preference for simpler designs at least initially
- Use specialized relationships carefully
- Use notation precisely

