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Understanding Opportunity Scenarios

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Objectives

- Define the steps in Scenario Based Modeling
- Introduce the Scenario Based Modeling Process
- Briefly show how the process can be used by stakeholders

Outline

- Define
  - Opportunity
  - Scenario
  - Scoping
  - Value Based Metrics
  - Scenario Based Modeling
    - Baseline
    - Scenario

Opportunity

- An opportunity is a proposed change to the operation or management of the river system that is expected to provide some benefit

Opportunities Vary Among Stakeholders

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Install a Turbine

Implement Fish Passage

Alter Discharge Timing

Line a canal

Scenario

- A scenario is a set of opportunities that combine to provide a mix of benefits.
  - If opportunities are not compatible, they must reside in different scenarios

A Scenario is a Set of Opportunities

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Scenario A

- Line a canal
- Install a Turbine
- Implement Fish Passage
- Alter Discharge Timing

Scoping

- Scoping is an incremental evaluation of an opportunity that reveals how the mix of benefits (positive and negative) changes across a range of management
  - Reveals tradeoffs among benefits

Scoping Explores the Range of an Opportunity

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Line a canal

Install a Turbine

Scenario A

Implement Fish Passage

Alter Discharge Timing

Value Based Metrics

- A Value Based Metric is a representation of an aspect of the river system that is valued by a stakeholder
  - This value need not be common across stakeholder groups

Value Based Metrics Are Derived From Stakeholder Values

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Instream Flow For Fish

Irrigation Water Reliability

Electricity Generation → Electricity Generation MWH per year

Recreational Fishing

Scenario Based Modeling

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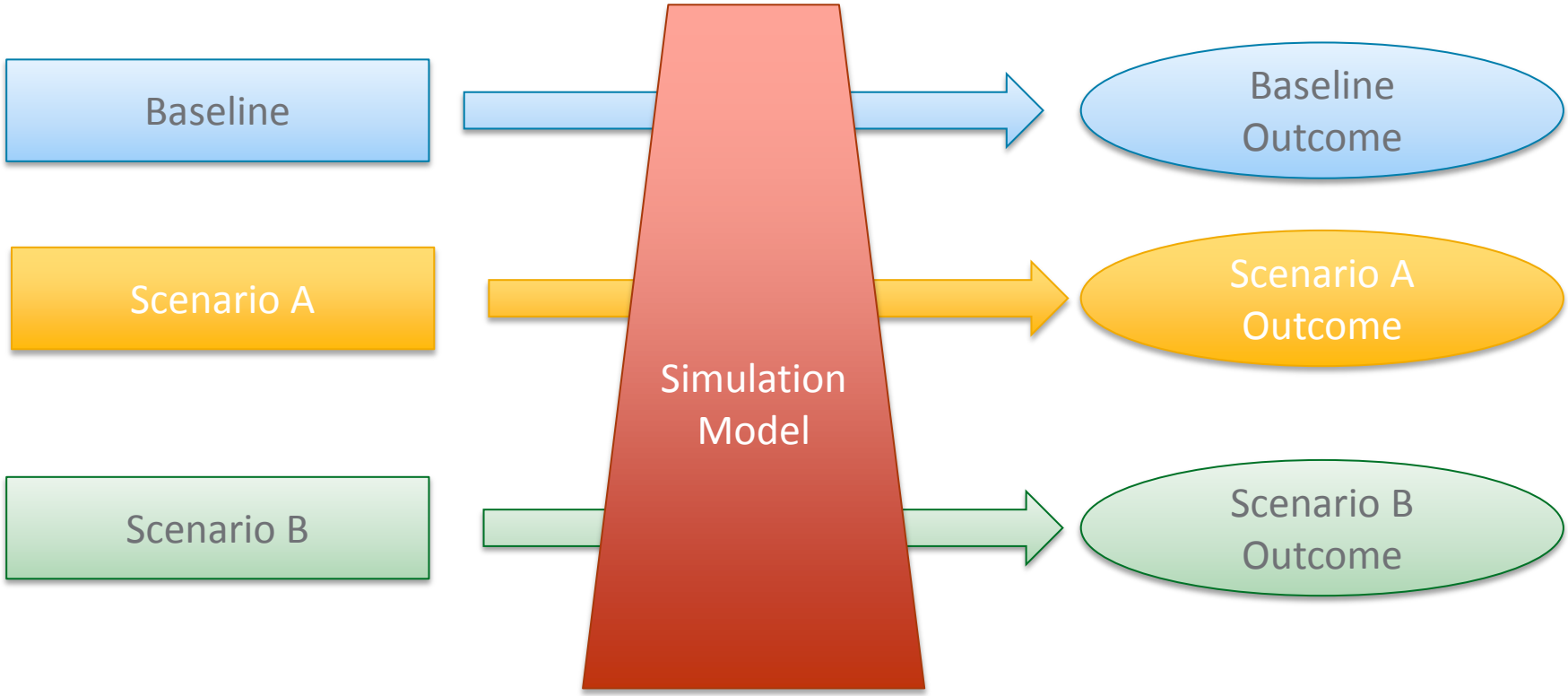
- Facilitates comparisons of management alternatives contained in one or more scenarios
- Benefits are evaluated by comparing value based metrics among scenarios

Scenario Based Modeling



Opportunities

Value Based Metrics

Tools Facilitate Exploration and Communication

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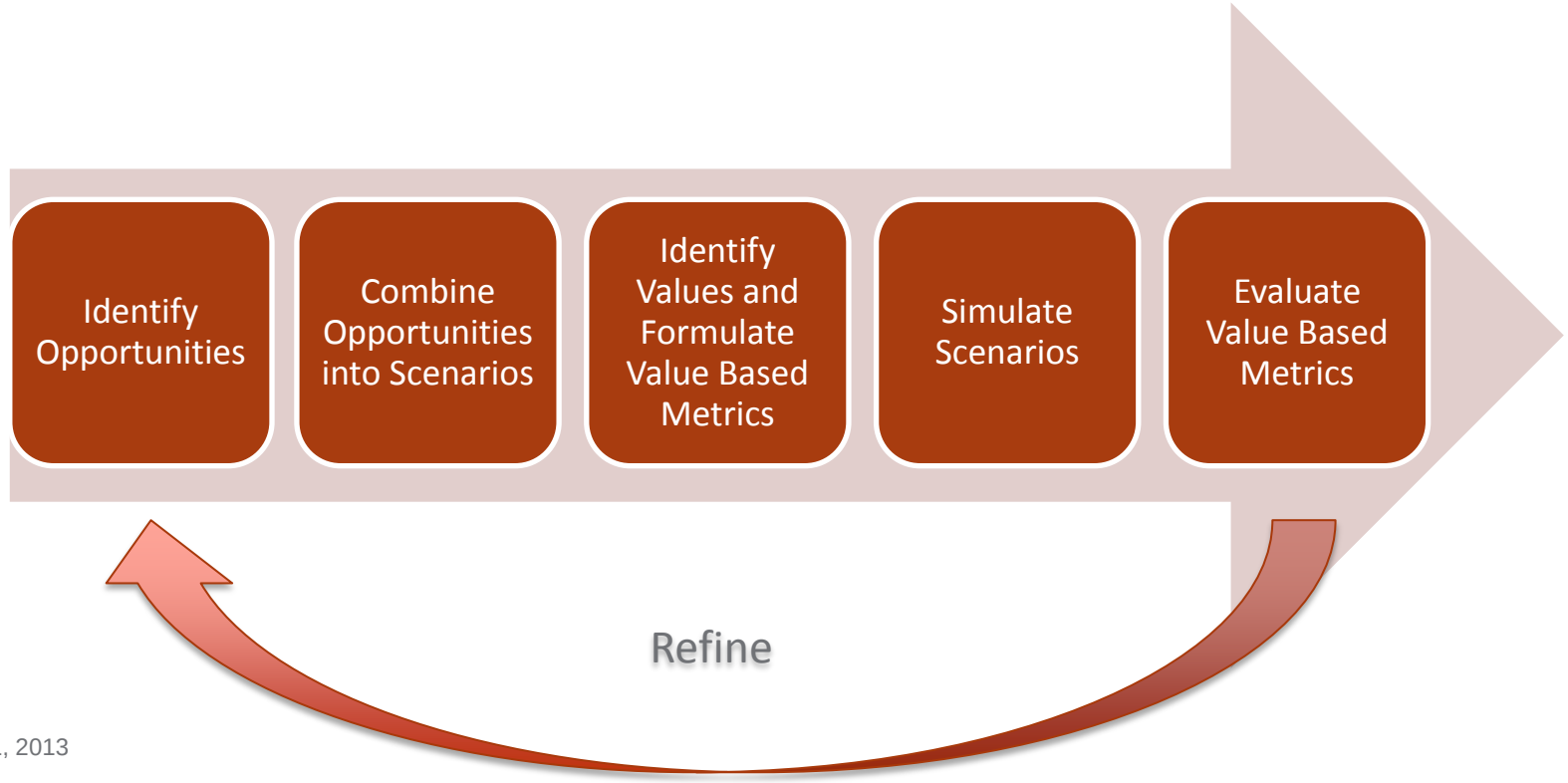
Inputs can be modified and additional alternatives can be evaluated



Rest of the day

- Before Lunch
  - More detailed explanations of opportunities and the Scenario Based Modeling process
- After Lunch
  - In depth information on the simulation model
  - Input from stakeholders