#### FAMES ESD.04 / 1.041 Spring 2007

### THE CLIOS PROCESS

STAGE 2: DESIGN, EVALUATION AND SELECTION
STAGE 3: IMPLEMENTATION
(INTRODUCTORY COMMENTS)

PART II

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March 13, 2007 and forward

#### Strategic Alternatives of Various Kinds

#### In the Physical Domain:

- physical "hardware"
- policy-driven e.g. environmental regulations

#### On the Institutional Sphere:

- Changes to organizations Structural / Functional
- Changes to relationships between organizations

Recognize that changes on the institutional sphere may be needed to make physical domain changes implementable.

# Step 8: Flag Important Areas of Uncertainty (1)

Uncertainty is everywhere – deal with it!

Possible uncertainties (simply as examples):

- Demand for services produced by our CLIOS System
- Rate of technology development and acceptance
- Change in macro-economic or geo-political situation

We are thinking ahead to the development of flexible strategic alternatives

# Step 8: Flag Important Areas of Uncertainty (2)

### Uncertainty in the performance of the system

- Subsystem and system-wide level
- Links with large magnitude, fastmoving, non-linear or irreversible influences on other components within the system (Step 5)
- . "Openness" of the system
- Analyze the impact of key external factors

# Step 8: Flag Important Areas of Uncertainty (3)

- Scenario Planning as a technique for thinking about uncertainty.
- Developed in the 1970s by Royal Dutch Shell.
- The idea: "coherent credible stories about alternative futures"
- "Practicing" the future training your mind to recognize alternative ways events can play out.

# Step 8: Flag Important Areas of Uncertainty (4)

- An approach to scenario building in the CLIOS Process
  - Link the CLIOS System to its broader environment
  - Identify the external forces that influence the common drivers
  - international trade regimes, societal attitudes, environmental movements, and many others
  - CLIOS Systems are "open" systems, and the most significant uncertainties may come from "outside" the CLIOS

### Step 9: Evaluate Strategic Alternatives and Select Robust Bundles that Perform "Best" Across Futures (1)

Evaluate strategic alternatives and refine them as appropriate.

Consider whether to include flexibility in the strategic alternatives.

Select robust bundles of strategic alternatives, recognizing the interaction effects of various strategic alternatives.