ENVIRONMENTAL DECISION MAKING

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One day Alice came to a fork in the road and saw a Cheshire cat in a tree. "Which road do I take?" she asked. His response was a question: "Where do you want to go?" "I don't know," Alice answered. "Then," said the cat, "it doesn't matter." [Lewis Carroll (1832-98), novelist]

Decision making has been defined as a process by which a person, group, or organization identifies a choice or judgment to be made, gathers and evaluates information about alternatives, and selects from among those alternatives. As a process, decision making explains a stream of thoughts and behaviors that also includes an element of risk. The decision making process has been characterized in a number of ways, but the following seven distinct phases can be related to by most commercial flower growers and marketers:

1. *Recognition* – realizing that there is a decision to be made.

2. *Formulation* – exploring and classifying the decision situation and forming a basic understanding of the relevant objectives and values.

3. *Alternative Generation* – producing a set of choices.

4. *Information Search* – identifying the attributes or properties of the alternatives under consideration.

5. *Judgment and Choice* – evaluating and comparing alternatives.

6. *Action* – taking action based on the decision.

7. *Feedback* – receiving information about the outcome of the action that permits changes in substantive knowledge and decision rules.

A more concrete and step-wise model of decision making that combines the main procedural concepts identified above indicates that a decision is obtained by:

- formulating the possible alternatives and specifying the objectives;
- identifying the relevant influential factors;
- evaluating and analyzing each alternative;
- comparing and ranking the alternatives; and
- selecting the alternative that provides the best overall outcome relative to the objective.

"To decide not to decide is to decide." [Anonymous] Decision making is not simply a matter of phases, but is strongly influenced by the characteristics of the decision maker. These characteristics define certain styles of decision making that ultimately control how the decision process unfolds. Therefore, an information technology to support decision making must be flexible enough to accommodate these variations in how decisions are derived.

The decision making process described earlier, while instructive, fails to illuminate the reasoning methods individuals employ when approaching a problem. Each decision maker approaches a problem differently depending on factors such as background, experience, inherent psychological conditioning, and the situation surrounding the problem. Five of the more widely understood models to describe the styles employed by decision makers when they approach a decision problem include:

The Rational Model – views decision making as a structured process by which the individual or group systematically reduces the decision problem to a set of measurable quantities or qualities that influence the desired outcome.

The Organizational Model – implies that the decision maker is more directly concerned with following established policies or guidelines than with evaluating all relevant factors that influence a decision in a quantitative manner.

The Political Model – characterizes decision making in a political setting where decisions result from group interaction.

The Satisficing Model – defines the case where an optimal solution to a problem may not exist, or where the requirements for a single best solution may be impractical due to the constraints imposed by time, costs, or personal factors.

The Individual Model – gives emphasis to the individual decision makers' idiosyncrasies.

Which decision making style portrays your mode of operation? Identifying the problem and specifying the factors involved are greatly influenced by the approach or model defining the "setting" in which the decision is made. From an information technology perspective, problems can be described as either programmed or non-programmed. Programmed decisions define problems that are repetitive or routine. Non-programmed decisions are unstructured and unique and require the exercise of judgment, intelligence, and adaptive problem solving behavior.

"Please find me a one-armed economist so we will not always hear 'on the other hand...'"
[Herbert Hoover (1874 - 1964), 31st President of the United States]